

OIIPE

RAW SEQUENCE LISTING

DATE: 07/19/2001

PATENT APPLICATION: US/09/801,968

TIME: 15:58:46

Input Set : A:\40901.app.txt

Output Set: N:\CRF3\07192001\I801968.raw

ENTERED

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4 <110> APPLICANT: Itoh, Nobuyuki
5   Kavanaugh, W. Michael
8 <120> TITLE OF INVENTION: HUMAN FGF-23 GENE AND GENE EXPRESSION
9   PRODUCTS
12 <130> FILE REFERENCE: PP-17150.001/201130.40901
15 <140> CURRENT APPLICATION NUMBER: 09/801,968
16 <141> CURRENT FILING DATE: 2001-03-07
19 <160> NUMBER OF SEQ ID NOS: 46
21 <170> SOFTWARE: FastSEQ for Windows Version 4.0
23 <210> SEQ ID NO: 1
24 <211> LENGTH: 756
25 <212> TYPE: DNA
26 <213> ORGANISM: Mus musculus
28 <400> SEQUENCE: 1
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30 actgctagag cctatccaga cacttcccca ttgcttggct ccaactgggg aagcctgacc      120
31 caoctgtaca cggctacagc caggaccagc tatcacctac agatccatag ggatggatcat      180
32 gtagatggca cccccatca gaccatctac agtgccctga tgattacatc agaggacgcc      240
33 ggctctgtgg tgataacagg agccatgact cgaagggttc tttgtatgga tctccacggc      300
34 aacatttttg gatcgcttca cttcagccca gagaattgca agttccgcca gtggacgctg      360
35 gagaatggct atgacgtcta cttgtcgcag aagcatcact acctggtgag cctgggcgcg      420
36 gccaaagcga ttttccagcc gggcaccac cgcgcgcct tctcccagtt cctggctcgc      480
37 aggaacgagg tcccgcgtgt gcacttctac actgttcgcc caccgcgcca caccgcgcagc      540
38 gccgaggacc cacccgagcg cgacccactg aacgtgtcga agccgcggcc cgcgcgccagc      600
39 cctgtgcctg tatcctgtc tcgcgagctg ccgagcgcag aggaaggtgg ccccgagcc      660
40 agcgatcctc tgggggtgct gcgcagaggc cgtggagatg ctgcgcgggg cgcgggaggc      720
41 gcggataggt gtcgcccctt tcccaggttc gtctag      756
43 <210> SEQ ID NO: 2
44 <211> LENGTH: 251
45 <212> TYPE: PRT
46 <213> ORGANISM: Mus musculus
48 <400> SEQUENCE: 2
49 Met Leu Gly Thr Cys Leu Arg Leu Leu Val Gly Val Leu Cys Thr Val
50 1 5 10 15
51 Cys Ser Leu Gly Thr Ala Arg Ala Tyr Pro Asp Thr Ser Pro Leu Leu
52 20 25 30
53 Gly Ser Asn Trp Gly Ser Leu Thr His Leu Tyr Thr Ala Thr Ala Arg
54 35 40 45
55 Thr Ser Tyr His Leu Gln Ile His Arg Asp Gly His Val Asp Gly Thr
56 50 55 60
57 Pro His Gln Thr Ile Tyr Ser Ala Leu Met Ile Thr Ser Glu Asp Ala
58 65 70 75 80
59 Gly Ser Val Val Ile Thr Gly Ala Met Thr Arg Arg Phe Leu Cys Met
60 85 90 95
61 Asp Leu His Gly Asn Ile Phe Gly Ser Leu His Phe Ser Pro Glu Asn
62 100 105 110
63 Cys Lys Phe Arg Gln Trp Thr Leu Glu Asn Gly Tyr Asp Val Tyr Leu

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64          115          120          125
65 Ser Gln Lys His His Tyr Leu Val Ser Leu Gly Arg Ala Lys Arg Ile
66          130          135          140
67 Phe Gln Pro Gly Thr Asn Pro Pro Phe Ser Gln Phe Leu Ala Arg
68 145          150          155          160
69 Arg Asn Glu Val Pro Leu Leu His Phe Tyr Thr Val Arg Pro Arg Arg
70          165          170          175
71 His Thr Arg Ser Ala Glu Asp Pro Pro Glu Arg Asp Pro Leu Asn Val
72          180          185          190
73 Leu Lys Pro Arg Pro Arg Ala Thr Pro Val Pro Val Ser Cys Ser Arg
74          195          200          205
75 Glu Leu Pro Ser Ala Glu Glu Gly Gly Pro Ala Ala Ser Asp Pro Leu
76          210          215          220
77 Gly Val Leu Arg Arg Gly Arg Gly Asp Ala Arg Gly Gly Ala Gly Gly
78 225          230          235          240
79 Ala Asp Arg Cys Arg Pro Phe Pro Arg Phe Val
80          245          250
82 <210> SEQ ID NO: 3
83 <211> LENGTH: 756
84 <212> TYPE: DNA
85 <213> ORGANISM: Homo sapiens
87 <400> SEQUENCE: 3
88 atgttggggg cccgcctcag gctctggggtc tgtgccttgt gcagcgtctg cagcatgagc 60
89 gtccctcagag cctatcccaa tgccctccca ctgctcggtt ccagctgggg tggcctgac 120
90 cacctgtaca cagccacagc caggaacagc taccacctgc agatccacaa gaatggccat 180
91 gtggatggcg caccocatca gaccatctac agtgccttga tgatcagatc agaggatgct 240
92 ggcttttgtg tgattacagg tgtgatgagc agaagatacc tctgcatgga tttcagaggc 300
93 aacatttttg gatcacacta tttcgaccgg gagaactgca ggttccaaca ccagacgctg 360
94 gaaaacgggt acgacgtcta ccactctct cagtatcact tcctgggtcag tctgggccc 420
95 gcgaagagag ccttcctgcc aggcattgaac ccaccccggt actcccagtt cctgtcccgg 480
96 aggaacgaga tccccctaatt tcaattcaac acccccatac cacggcggca caccgggagc 540
97 gccgaggacg actcggagcg ggaccccttg aacgtgctga agccccgggc ccggatgacc 600
98 ccggccccgg cctcctgttc acaggagctc ccgagcgccg aggacaacag cccgatggcc 660
99 agtgacccat taggggtggt caggggcggt cgagtgaaca cgcacgctgg gggaacgggc 720
100 ccggaaggct gccgcccctt cgccaagttc atctag 756
102 <210> SEQ ID NO: 4
103 <211> LENGTH: 251
104 <212> TYPE: PRT
105 <213> ORGANISM: Homo sapiens
107 <400> SEQUENCE: 4
108 Met Leu Gly Ala Arg Leu Arg Leu Trp Val Cys Ala Leu Cys Ser Val
109 1          5          10          15
110 Cys Ser Met Ser Val Leu Arg Ala Tyr Pro Asn Ala Ser Pro Leu Leu
111          20          25          30
112 Gly Ser Ser Trp Gly Gly Leu Ile His Leu Tyr Thr Ala Thr Ala Arg
113          35          40          45
114 Asn Ser Tyr His Leu Gln Ile His Lys Asn Gly His Val Asp Gly Ala
115          50          55          60
116 Pro His Gln Thr Ile Tyr Ser Ala Leu Met Ile Arg Ser Glu Asp Ala

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117	65					70				75					80	
118	Gly	Phe	Val	Val	Ile	Thr	Gly	Val	Met	Ser	Arg	Arg	Tyr	Leu	Cys	Met
119					85					90					95	
120	Asp	Phe	Arg	Gly	Asn	Ile	Phe	Gly	Ser	His	Tyr	Phe	Asp	Pro	Glu	Asn
121				100					105					110		
122	Cys	Arg	Phe	Gln	His	Gln	Thr	Leu	Glu	Asn	Gly	Tyr	Asp	Val	Tyr	His
123			115					120					125			
124	Ser	Pro	Gln	Tyr	His	Phe	Leu	Val	Ser	Leu	Gly	Arg	Ala	Lys	Arg	Ala
125		130					135					140				
126	Phe	Leu	Pro	Gly	Met	Asn	Pro	Pro	Pro	Tyr	Ser	Gln	Phe	Leu	Ser	Arg
127	145				150					155						160
128	Arg	Asn	Glu	Ile	Pro	Leu	Ile	His	Phe	Asn	Thr	Pro	Ile	Pro	Arg	Arg
129				165					170						175	
130	His	Thr	Arg	Ser	Ala	Glu	Asp	Asp	Ser	Glu	Arg	Asp	Pro	Leu	Asn	Val
131			180					185					190			
132	Leu	Lys	Pro	Arg	Ala	Arg	Met	Thr	Pro	Ala	Pro	Ala	Ser	Cys	Ser	Gln
133			195					200				205				
134	Glu	Leu	Pro	Ser	Ala	Glu	Asp	Asn	Ser	Pro	Met	Ala	Ser	Asp	Pro	Leu
135		210					215				220					
136	Gly	Val	Val	Arg	Gly	Gly	Arg	Val	Asn	Thr	His	Ala	Gly	Gly	Thr	Gly
137	225				230				235						240	
138	Pro	Glu	Gly	Cys	Arg	Pro	Phe	Ala	Lys	Phe	Ile					
139				245				250								

141 <210> SEQ ID NO: 5

142 <211> LENGTH: 20

143 <212> TYPE: DNA

144 <213> ORGANISM: Artificial Sequence

146 <220> FEATURE:

147 <223> OTHER INFORMATION: Sense PCR primer

149 <400> SEQUENCE: 5

150 agcaccagcc actcagagca

20

152 <210> SEQ ID NO: 6

153 <211> LENGTH: 20

154 <212> TYPE: DNA

155 <213> ORGANISM: Artificial Sequence

157 <220> FEATURE:

158 <223> OTHER INFORMATION: Antisense PCR primer

160 <400> SEQUENCE: 6

161 cttccagcga ccctagatga

20

163 <210> SEQ ID NO: 7

164 <211> LENGTH: 21

165 <212> TYPE: DNA

166 <213> ORGANISM: Artificial Sequence

168 <220> FEATURE:

169 <223> OTHER INFORMATION: Sense primer for mouse FGF-23

171 <400> SEQUENCE: 7

172 ctgatgatta catcagagga c

21

174 <210> SEQ ID NO: 8

175 <211> LENGTH: 20

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176 <212> TYPE: DNA
177 <213> ORGANISM: Artificial Sequence
179 <220> FEATURE:
180 <223> OTHER INFORMATION: Antisense primer for mouse FGF-23
182 <400> SEQUENCE: 8
183 caccaggtag tgatgcttct 20
185 <210> SEQ ID NO: 9
186 <211> LENGTH: 21
187 <212> TYPE: DNA
188 <213> ORGANISM: Artificial Sequence
190 <220> FEATURE:
191 <223> OTHER INFORMATION: Antisense primer for mouse FGF-23
193 <400> SEQUENCE: 9
194 atccatacaa aggaaccttc g 21
196 <210> SEQ ID NO: 10
197 <211> LENGTH: 27
198 <212> TYPE: DNA
199 <213> ORGANISM: Artificial Sequence
201 <220> FEATURE:
202 <223> OTHER INFORMATION: adaptor primer
204 <400> SEQUENCE: 10
205 ccatacctaatacgcactcact atagggc 27
207 <210> SEQ ID NO: 11
208 <211> LENGTH: 23
209 <212> TYPE: DNA
210 <213> ORGANISM: Artificial Sequence
212 <220> FEATURE:
213 <223> OTHER INFORMATION: adaptor primer
215 <400> SEQUENCE: 11
216 actcactata gggctcgagc ggc 23
218 <210> SEQ ID NO: 12
219 <211> LENGTH: 20
220 <212> TYPE: DNA
221 <213> ORGANISM: Artificial Sequence
223 <220> FEATURE:
224 <223> OTHER INFORMATION: Sense primer for mouse FGF-23.
226 <400> SEQUENCE: 12
227 actcagtgtgtgcaatgct 20
229 <210> SEQ ID NO: 13
230 <211> LENGTH: 20
231 <212> TYPE: DNA
232 <213> ORGANISM: Artificial Sequence
234 <220> FEATURE:
235 <223> OTHER INFORMATION: Antisense primer for mouse FGF-23
237 <400> SEQUENCE: 13
238 gacctagacg aacctgggaa 20
240 <210> SEQ ID NO: 14
241 <211> LENGTH: 216
242 <212> TYPE: PRT

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243 <213> ORGANISM: Homo sapiens
245 <400> SEQUENCE: 14
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247 1 5 10 15
248 Trp Leu Ala Val Ala Gly Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro
249 20 25 30
250 His Val His Tyr Gly Trp Gly Asp Pro Ile Arg Leu Arg His Leu Tyr
251 35 40 45
252 Thr Ser Gly Pro His Gly Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala
253 50 55 60
254 Asp Gly Val Val Asp Cys Ala Arg Gly Gln Ser Ala His Ser Leu Leu
255 65 70 75 80
256 Glu Ile Lys Ala Val Ala Leu Arg Thr Val Ala Ile Lys Gly Val His
257 85 90 95
258 Ser Val Arg Tyr Leu Cys Met Gly Ala Asp Gly Lys Met Gln Gly Leu
259 100 105 110
260 Leu Gln Tyr Ser Glu Glu Asp Cys Ala Phe Glu Glu Glu Ile Arg Pro
261 115 120 125
262 Asp Gly Tyr Asn Val Tyr Arg Ser Glu Lys His Arg Leu Pro Val Ser
263 130 135 140
264 Leu Ser Ser Ala Lys Gln Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu
265 145 150 155 160
266 Pro Leu Ser His Phe Leu Pro Met Leu Pro Met Val Pro Glu Glu Pro
267 165 170 175
268 Glu Asp Leu Arg Gly His Leu Glu Ser Asp Met Phe Ser Ser Pro Leu
269 180 185 190
270 Glu Thr Asp Ser Met Asp Pro Phe Gly Leu Val Thr Gly Leu Glu Ala
271 195 200 205
272 Val Arg Ser Pro Ser Phe Glu Lys
273 210 215
275 <210> SEQ ID NO: 15
276 <211> LENGTH: 209
277 <212> TYPE: PRT
278 <213> ORGANISM: Homo sapiens
280 <400> SEQUENCE: 15
281 Met Asp Ser Asp Glu Thr Gly Phe Glu His Ser Gly Leu Trp Val Ser
282 1 5 10 15
283 Val Leu Ala Gly Leu Leu Leu Gly Ala Cys Gln Ala His Pro Ile Pro
284 20 25 30
285 Asp Ser Ser Pro Leu Leu Gln Phe Gly Gly Gln Val Arg Gln Arg Tyr
286 35 40 45
287 Leu Tyr Thr Asp Asp Ala Gln Gln Thr Glu Ala His Leu Glu Ile Arg
288 50 55 60
289 Glu Asp Gly Thr Val Gly Gly Ala Ala Asp Gln Ser Pro Glu Ser Leu
290 65 70 75 80
291 Leu Gln Leu Lys Ala Leu Lys Pro Gly Val Ile Gln Ile Leu Gly Val
292 85 90 95
293 Lys Thr Ser Arg Phe Leu Cys Gln Arg Pro Asp Gly Ala Leu Tyr Gly
294 100 105 110

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VERIFICATION SUMMARY

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